MODIS sensor Working Group (MsWG) Summary   May 19, 2004

Attendance: Bob Barnes, Stuart Biggar, Vincent Chiang, Gene Eplee, Hector Erives, Gerhard Meister, Chris Moeller, Fred Patt, Vince Salomonson, Junqiang Sun, Gary Toller, Eric Vermote, Jack Xiong, Zhengming Wan, Aisheng Wu

Scheduled Agenda

Item 1: LUT delivery
JX)   Regular m1 update for Terra V4.3.0.8, mainly for B8 about 0.5% change and RVS change more than 0.5% at the end of scan angle for Ocean bands. There is also a detector flag set to out-of-family on B28, and the SWIR x_oob_1 update associated with that detector (detector #10 in product order).

Item 2: Terra B28 Ch10 status
JX)   Linear gain b1 increased by 25% (out-of-family), and NEdT also increased to 0.17K after day 2004118. The NEdT was 0.05K before. Note that the spec value is 0.25K for B28.

Item 3: Terra SRCA 10W lamp #2 (B) issue
JX)   This issue has been reported in the last two MsWG. The lamp replacement plan has been accepted by SBRS. It will be using the backup lamp #4 for the future calibration.

Added Item

Item 1: Forward m1 update strategy
JX)   There has been some discussions about how to improve the forward m1 LUT update. Currently we are using measured m1 to forward process both Terra and Aqua. Whenever we see a half percent change, we update the m1 as a step function. Another way is to use a predicted curve based on the recent m1 measurements. According to the Ocean group, the Aqua predicted m1 is very close to the measured value. They suggest using predicted m1 for forward processing. MCST did use this method on Terra before. But later Miami has requested to use measured m1. We would like to ask everyone's opinion.

EV)   I agree with the 2nd approach to use predicted m1.

CM)   I don't see any problem here. Agree!

SB)   I agree too. We even tried to convince Japanese instrument to use the smooth approach calibration, but they still use the step function.

JX)   This "new" approach mainly affects the VIS bands. We have the capability to quickly update the new m1 curves if we see the measured m1's do not follow the predicted trends. So, all disciplines approve this approach for forward processing.

Around the Table

Participant: Eric Vermote – Terra SWIR B7 striping issue
EV)   I am working with MCST (VC) on the de-striping issue for Band 7. I have some polarization memos today from MCST as well.

JX)   This is mainly for SWIR bands and we know there are cross-talk problems there. It's similar to Chris' atmosphere bands' de-striping.

CM)   Could you (EV) pass on some information on the data set? So I can take a look at it, too.

Action: VC will coordinate with EV for possible de-striping methods before the next MsWG. VC will pass the granule information to CM.

Participant: Bob Barnes – Terra and Aqua comparison

BB)   Stuart, what do you think is the Terra agreement with Aqua, 2 to 3%? Lunar data shows that much difference.

SB)   That's about right, I think.

EV)   I see about 1 to 2% on the land products. We are adjusting Terra to Aqua.

JX)   Can you send us some results?

Action: EV will send some results to show the comparison between Terra and Aqua.

Participant: Stuart Biggar – Field campaign

SB)   The calibration team has been to the Railroad Valley to collect data, but the weather has not been good for us.

Participant: Chris Moeller – Terra B28 detector 10 noisy issue

CM)   I looked at some of the recent B28 data and found that detector 10 is quite noisy. Within the same scan I can see spikes from that detector. Should we set this as a noisy detector?

JX)   I thought we wanted to set it as noisy detector, but the NEdT turns out to be smaller than the spec. It is possible that over the Blackbody it is not too bad for 50 frames, but when it comes to the EV it is quite different. We will look at this more.

Action: CM will send some slides about the noisy detector. MCST will order more data and will track NEdT scan to scan.

Participant: Jack Xiong – Terra RVS (DSM) testing

JX)   Chris, have you (atmosphere group) finished testing/reviewing the global data set for the new Terra DSM RVS? Is the result OK?

CM)   I still need to look a little more on this. Some of the results turned out differently than I expected. I don't think it's the processing problem at DAAC. Maybe it's our forward model that I have to spend some time to look more. We may ask to test some more granules if MCST can process that for us.

JX)   We can do that.

Participant: Jack Xiong – There will be a presentation by Robert Wolfe in the next hour starting at 3PM on the topic of MODIS SD seasonal analysis for the Earth shine issue.

Next MsWG meeting June 2, 2004